

CLAIMS

What is claimed is:

1. A method of processing a plurality of discrete events, each discrete event
5 comprising a plurality of independent sub-events, said method comprising the steps of:
distributing each discrete event into one of a plurality of segments, each segment
comprising a sequence of at least one discrete event to be processed;
initiating each of said plurality of segments to execute concurrently on said at least
one processor;
10 for each segment, processing each discrete event contained within said segment
sequentially;
for each discrete event, processing each independent sub-event of said discrete
event sequentially and then storing the results of said processing;
monitoring each of said segments to detect failures;
15 deactivating each segment for which a failure is detected;
re-initializing each failed segment; and
re-initiating each failed segment.
2. The method of claim 1 wherein said discrete event is a customer account and
20 wherein said step of processing each discrete event comprises determining billing
information for each customer account.
3. The method of claim 1 wherein said discrete event is a customer account and
wherein said independent sub-events comprise customer information and customer calls.

4. The method of claim 1 wherein said discrete event is a customer account, wherein said step of processing each discrete event comprises determining billing information and wherein billing information for each customer account is stored immediately after each customer account is processed.

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5. The method of claim 1 wherein said discrete event is a customer account and wherein said step of processing each discrete event comprises determining billing information and further comprising the step of generating an invoice for each customer account immediately after processing each customer account.

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6. The method of claim 1 wherein said step of processing is performed using a symmetrical multiprocessing system.

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7. The method of claim 1 wherein said step of processing is performed using a massively parallel processing system.

8. The method of claim 1 wherein said step of processing is performed using a loosely coupled distributed processing system.

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9. A method of processing a plurality of discrete events, each discrete event comprising a plurality of independent sub events, said method comprising the steps of:
distributing each discrete event into one of a plurality of segments, each segment comprising a sequence of at least one discrete event to be processed;
initiating each of said plurality of segments on said at least one processor;

for each segment, processing each discrete event contained within said segment sequentially;

for each discrete event, processing each independent sub-event of said discrete event sequentially and then storing the results of said processing;

5 monitoring each segment to detect failures in processing the discrete events contained within said segment;

deactivating each segment for which a failure is detected;

creating a new segment containing at least one unprocessed discrete event from each failed segment; and

10 initiating each new segment.

10. The method of claim 9 wherein a plurality of new segments are created, each of said new segments containing at least one unprocessed discrete event.

15 11. The method of claim 9 wherein said discrete event is a customer account and wherein said step of processing each discrete event comprises determining billing information for each customer account.

20 12. The method of claim 9 wherein said discrete event is a customer account and wherein said independent sub-events comprise customer information and customer calls.

13. The method of claim 9 wherein said step of processing is performed using a symmetrical multiprocessing system.

14. The method of claim 9 wherein said step of processing is performed using a massively parallel processing system.

15. The method of claim 9 wherein said step of processing is performed using a
5 loosely coupled distributed processing system.

16. A computer system for processing a plurality of discrete events, each discrete event comprising a plurality of independent sub-events, said system comprising:

distributing means for distributing each discrete event into one of a plurality of
10 segments, each segment comprising a sequence of at least one discrete event to be processed;

initiating means for initiating each of said plurality of segments to execute concurrently on at least one processor;

said at least one processor for processing each discrete event sequentially within
15 each segment and for processing each independent sub-event of each discrete event sequentially within each discrete event;

memory means for storing each processed discrete event;

monitoring means for monitoring each segment to detect failures in processing the discrete events contained within each segment;

20 deactivating means for deactivating each segment for which a failure is detected;

initializing means for creating a new segment containing at least one unprocessed discrete event from each failed segment; and

initiating means for initiating each new segment.

17. The system of claim 16 wherein a plurality of new segments are created, each of said new segments containing at least one unprocessed discrete event.

18. The system of claim 16 wherein said discrete event is a customer account and wherein said step of processing each discrete event comprises determining billing information for each customer account.

19. The system of claim 16 wherein said discrete event is a customer account and wherein said independent sub events comprise customer information and customer calls.

20. The system of claim 16 wherein said discrete event is a customer account, wherein said processing means determines billing information and wherein billing information for each customer account is stored in said memory means immediately after each customer account is processed.

21. The system of claim 16 wherein said discrete event is a customer account, wherein said processing means determines billing information and further comprising the step of generating an invoice for each customer account immediately after processing each customer account.

22. The system of claim 16 wherein said at least one processor comprises a symmetrical multiprocessing system.

23. The system of claim 16 wherein said at least one processor comprises a massively parallel processing system.

24. The method of claim 16 wherein said at least one processor comprises a loosely coupled distributed processing system.

25. A computer system for processing a plurality of discrete events, each discrete event comprising a plurality of independent sub events, said system comprising:

distributing means for distributing each discrete event into one of a plurality of segments, each segment comprising a sequence of at least one discrete event to be processed;

first initiating means for initiating said plurality of segments on at least one processor;

at least one processor for processing each discrete event sequentially within each segment and for processing each independent sub event of each discrete event sequentially within each discrete event;

memory means for storing each processed discrete event;

monitoring means for monitoring each of said segments to detect failures;

deactivating means for deactivating each segment for which a failure is detected;

segment creating means for creating a new segment from the failed segment comprising the unprocessed discrete events from the failed segment; and

second initiating means for initiating the new segment.

26. The system of claim 25 wherein said discrete event is a customer account and wherein at least one processor determines billing information for each customer account.

27. The system of claim 25 wherein said discrete event is a customer account and wherein said independent sub events comprise customer information and customer calls.